

# HYBRID ELECTRIC VEHICLE AUXILIARY OIL PUMP

## Abstract of Disclosure

An automatic transmission for a hybrid electric vehicle where an engine is shut down during vehicle stops to improve fuel economy. The automatic transmission includes a main pump that is driven off of a transmission input shaft, and an electronically driven auxiliary pump. A shut down shuttle valve switches a hydraulic circuit connection from the main pump to the auxiliary pump for a low-reverse clutch and a forward clutch when the vehicle stops in drive or low gear. A pressure transducer, controller and steady state relay allow for closed loop feedback to control the auxiliary pump in order to assure sufficient hydraulic pressure while minimizing power consumption.

## Figures